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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,931	01/21/2004	David Louis Heiner	ILLINC.066A	5755
20995 7590 12/03/2010 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614				
EXAMINER HYUN, PAUL SANG HWA				
ART UNIT		PAPER NUMBER		
1772				
NOTIFICATION DATE		DELIVERY MODE		
12/03/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
efiling@kmob.com  
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**Advisory Action  
Before the Filing of an Appeal Brief**

<b>Application No.</b> 10/762,931	<b>Applicant(s)</b> HEINER ET AL.
<b>Examiner</b> PAUL S. HYUN	<b>Art Unit</b> 1772

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 24 November 2010 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☒ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_  
Claim(s) objected to: 30,31,35,36,48 and 49  
Claim(s) rejected: 1-19,29,32-34,37-47 and 50-53  
Claim(s) withdrawn from consideration: \_\_\_\_\_

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_  
13. ☐ Other: \_\_\_\_\_

/In Suk Bullock/  
Supervisory Patent Examiner, Art Unit 1772

Continuation of 3. NOTE: The proposed amendment adds new claims 54-56. New claims 54-56 further narrow the scope of claims 1, 9 and 39, respectively, by specifying the ability of the claimed systems. New claims 54-56 raise new issues that require further consideration and/or search.

Continuation of 5. Applicant's reply has overcome the following rejection(s): The rejection of claims 30,31,35,36,48 and 49 under 35 USC section 112 first paragraph for failing to comply with the written description requirement has been withdrawn in light of Applicant's remarks.

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments are not persuasive.

1) Applicant's arguments with respect to the rejections based on the combination of Balch and Van Brunt et al.:

Applicant argues that the claims are allowable over the disclosure of Balch and Van Brunt et al. because the references do not teach or suggest all of the elements recited in the independent claims. Specifically, Applicant argues that Balch does not disclose a dispenser system other than an array of capillary tubes that is used to dispense probe molecules to the surface of a substrate. Applicant also argues that Balch does not disclose a means for detecting and monitoring the reaction for which the dispenser system is employed. These arguments are not persuasive.

With respect to the dispenser, Balch discloses the use of ink-jet devices (see line 32, column 11) as well as robotic dispensing needles (see line 50, col. 31) for dispensing probes onto a substrate surface. The Examiner maintains the position that the ink-jet devices and the robotic needles disclosed by Balch are programmable to perform the type of dispensing recited in the claims. Thus, Applicant's argument that the claims are allowable because Balch only discloses an array of capillary tubes as a dispenser is not persuasive.

With respect to the means for detecting and monitoring the reaction for which the dispenser system is employed, it should be noted that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In this instance, the motivation for providing the apparatus disclosed by Balch with the claimed reaction monitoring software is provided by the disclosure of Van Brunt et al. Van Brunt et al. disclose an apparatus comprising a dispensing system and an optical detector for monitoring the progress of reactions occurring in fluid vessels. The apparatus is configured such that in the event that the detector does not detect a reaction occurring in the vessel, further processing of that fluid vessel is aborted. Given that Balch discloses that its apparatus can be used to conduct PCR (see lines 12-40, col. 35), which requires cyclical reagent dispensing, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Van Brunt et al. to the apparatus disclosed by Balch to save time and cost. Although Balch does not explicitly disclose the use of the aforementioned ink jet devices and robotic needles to dispense the reagents required to conduct PCR, the Examiner maintains the position that it would have been obvious, if not already apparent, to use an ink jet device or a robotic needle to deliver the reagents needed to conduct PCR. For the foregoing reasons, Applicant's argument that the claims are allowable because Balch does not disclose a dispenser other than an array of capillary tubes, or that Balch does not disclose a means for detecting and monitoring the reaction for which the dispenser system is employed is not persuasive.

Applicant also argues that there is no motivation to combine the teachings of Balch and Van Brunt et al. Specifically, Applicant argues that the apparatus disclosed by Balch is configured to form arrays, which can be accomplished in a single step. Thus, according to Applicant, the system disclosed by Balch does not require a reaction monitoring program that decides whether subsequent reagent dispensing is necessary. This argument is not persuasive because Applicant's argument is based on the premise that the apparatus disclosed by Balch is used solely for the purpose of forming arrays. However, as indicated above, the apparatus disclosed by Balch is used for various applications, including PCR, which requires cyclical dispensing of reagents to a single site. Thus, the Examiner maintains the position that there is sufficient motivation to combine the teachings of Balch and Van Brunt et al., and consequently, the rejections are maintained.

2) Applicant's arguments with respect to the rejections based on the combination of Balch and Hartwich et al.:

Applicant argues that the claims are patentable over the disclosure of Balch and Hartwich et al. for the same reasons that are applicable to the rejections based on the combination of Balch and Van Brunt et al. Specifically, Applicant argues that Balch does not disclose a dispenser system other than an array of capillary tubes that is used to dispense probe molecules to the surface of a substrate. Applicant also argues that Balch does not disclose a means for detecting and monitoring the reaction for which the dispenser system is employed. These arguments are not persuasive for the same reasons why the rejections based on the combination of Balch and Van Brunt et al. are maintained. Like Van Brunt et al., Hartwich et al. disclose an apparatus comprising a dispensing system and an optical detector for monitoring the progress of reactions occurring in fluid vessels. The apparatus is configured such that in the event that the detector does not detect a reaction occurring in the vessel, further processing of that fluid vessel is aborted. Thus, there is sufficient motivation to combine the teachings of Balch and Hartwich et al., and the combination of the two references disclose or suggest all of the elements recited in the independent claims.

3) Applicant's arguments with respect to the rejections based on the combination of Balch and Davies et al.:

Applicant argues that the claims are patentable over the disclosure of Balch and Davies et al. for the same reasons that are applicable to the rejections based on the combination of Balch and Van Brunt et al. Specifically, Applicant argues that Balch does not disclose a dispenser system other than an array of capillary tubes that is used to dispense probe molecules to the surface of a substrate. Applicant also argues that Balch does not disclose a means for detecting and monitoring the reaction for which the dispenser system is employed. These arguments are not persuasive for the same reasons why the rejections based on the combination of Balch and Van Brunt et al. are maintained. Like Van Brunt et al., Davies et al. disclose an apparatus comprising a dispensing system and an optical detector for monitoring the progress of reactions occurring in fluid vessels. The apparatus is configured such that in the event that the detector does not detect a reaction occurring in the vessel, further processing of that fluid vessel is aborted. Thus, there is sufficient motivation to combine the teachings of Balch and Davies et al., and the combination of the two references disclose or suggest all of the elements recited in the independent claims.